

## **Amendments to the Specification**

Please replace paragraph [0038] with the following amended paragraph:

[0038] FIG. 8 is a schematic diagram illustrating the internal structure of a trellis encoder shown in FIG. 7. The trellis encoder 436 includes a trellis coded modulation (TCM) encoder 810, a precoder 820, a memory 830-831 and 832 of the TCM encoder 810 and a memory 830 of precoder 820, and a switching unit 850.

Please replace paragraph [0039] with the following amended paragraph:

[0039] The TCM encoder 810 and the precoder 820 process input signals  $X_1$  and  $X_2$  in the conventional way and generate symbols. Here, each of the memory 830-832 is initialized at every M data fields, M being a natural number. The initialization is performed switching the input signals  $X_1$  and  $X_2$  in a switching unit 850.

Please replace paragraph [0040] with the following amended paragraph:

[0040] That is, when the switching is performed as shown in the wave lines of the drawing, the signals of each of the memory 830-832 are used for performing exclusive OR instead of the input signals  $X_1$  and  $X_2$ . This way, each of the memory 830-832 can be initialized to a '0' state, which is a null state. If each of the memory 830-832 of the trellis encoder 436 is initialized in each transmitting station, the subsequent data fields are generated in the same symbols.

Please replace paragraph [0042] with the following amended paragraph:

[0042] Each of ~~The~~ the memory 830-832 is initialized periodically by the switching operation in the switching unit 850. If the M values of all transmitting stations are the same, the trellis encoders 436 of the transmitting stations are initialized in the same period. Eventually, the signals inputted into the transmitting stations are the same, as described in FIGS. 5 and 6, and the signals outputted from the transmitting stations are the same, as described in FIGS. 7 and 8. Therefore, terrestrial broadcasting using a single frequency network can be operated.

Please replace paragraph [0043] with the following amended paragraph:

[0043] Meanwhile, an initial symbol is inserted in a predetermined period, i.e., a data field period M, instead of a data symbol in the switching unit 850. That is, instead of input signals  $X_1$  and  $X_2$ , signals stored in each of the memory 830-832 are inputted to an input terminal to generate an initialization symbol. When each of the memory 830-832 is initialized, two initialization symbols are generated for one trellis encoder 436. Meanwhile, in the ATSC A.53, 12 trellis encoders are used during the channel encoding process. Thus, a total of 24 initialization symbols are generated and inserted in a period of M.